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Docket No.: K-093

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re Application of	:	
Young Sik YOUN	:	
Serial No.: 09/348,634	:	Group Art Unit: 2685
Confirm. No.: 5523	:	Examiner: Tilahun B. GESESSE
Filed: July 6, 1999	:	

For: METHOD FOR PERFORMING AN ENHANCED RANDOM ACCESS USING INFORMATION OF FORWARD COMMON CHANNEL IN A MOBILE COMMUNICATION SYSTEM:

APPEAL BRIEF

Assistant Commissioner for Patents
Washington, D. C. 20231

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed February 25, 2003.

REAL PARTY IN INTEREST

The party in interest is the assignee, LG Information & Communications, Ltd.

RELATED APPEALS AND INTERFERENCES

The Appellant is unaware of any related appeals and interferences.

STATUS OF THE CLAIMS

This is an appeal from the Final Office Action dated August 26, 2002 of claims 1-15 and 17-20. Claim 16 is also pending, but has been indicated as allowable.

STATUS OF AMENDMENTS

All amendments filed in this application have been entered. A correct copy of appealed claims 1-15 and 17-20, including all entered amendments thereto, appear in the attached Appendix.

SUMMARY OF THE INVENTION

Embodiments of the present invention relate to a method comprising transmitting power control information to mobile stations through a forward common channel (claims 1-17). These embodiments may be advantageous as they provide an improved method for performing random access in a mobile communication system. Improved random access can improve message transmission efficiency and minimize random access failures. These attributes may be significant, as the minimization of random access failures may improve the capacity of a mobile communication system. For example, when random access failures are minimized, more mobile stations (e.g. cell phones) can be serviced by each base station (e.g. antenna tower). In turn, such a mobile communication system can provide more consistent service at lower monetary rates for cellular telephone subscribers (page 4 of the specification, lines 6-17).

ISSUES

1. Whether the Examiner erred in the rejection of claims 18-20 under 35 U.S.C. §112, first paragraph because one of ordinary skill in the art would appreciate that at least one of a mobile station and a base station include a receiver and circuitry.

2. Whether the Examiner erred in the rejection of claims 1-15 and 17 under 35 U.S.C. §103(a) because neither Corriveau et al. (U.S. Patent No. 5,991,633) nor Quick Jr. (U.S. Patent No. 5,673,259) disclose ". . . transmitting . . . power control information to respective mobile stations through [a] forward common channel."

GROUPING OF THE CLAIMS

Appealed claims 1-15 and 17 form a single group and stand or fall together. Claims 18-20 form a single group and stand or fall together.

THE ARGUMENT

Issue 1: Claims 18-20 were not properly rejected under 35 U.S.C. §112, first paragraph because one of ordinary skill in the art would appreciate that at least one of a mobile station and a base station include a receiver and circuitry.

The first paragraph of 35 U.S.C. § 112 states that "[t]he specification shall contain a written description of the invention ... to enable any person skilled in the art ... to make and use the same..." Descriptive matter may be inherently present in a specification if one skilled

in the art would necessarily recognize such a disclosure. *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

Claims 18-20 recite an apparatus comprising a receiver and circuitry. On page 2 of the Final Office Action dated August 26, 2002, it is stated that "...applicant's specification and drawing fails describe detail of a receiver and circuitry as claimed."

The present application does disclose a mobile station and a base station (e.g. page 6, line 20). The Appellant respectfully submits that one of ordinary skill in the art would appreciate that at least one of a mobile station and a base station include a receiver and circuitry. Accordingly, "a receiver" and "circuitry" are inherently present in the present specification such that one skilled in the art would necessarily recognize the disclosure.

At least because the recitations of "a receiver" and "circuitry" are inherently disclosed in the specification, the Appellant respectfully submits that the recitations of claims 18-20 conform with 35 U.S.C. §112, first paragraph.

Issue 2: Claims 1-15 and 17 were improperly rejected under 35 U.S.C. §103(a) because neither Corriveau et al. nor Quick Jr. disclose the recitation of ". . . transmitting . . . power control information to respective mobile stations through [a] forward common channel."

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest

all the claim limitations. Second, there must be some suggestion or motivation in the references themselves to modify the reference or to combine reference teachings. Third, there must be a reasonable expectation of success for the modification or combination of references.

The teaching or suggestion to make the modification or combination of prior art and the reasonable expectation of success must both be found in the prior art, and not based on Appellant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). There must be particular findings as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge to the claimed invention to combine or modify references. *In re Kotzab*, 217 F.3d 1365, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000). Conclusory statements cannot be relied upon for particular combinations of prior art and specific claims. *In re Lee*, 277 F.3d 1338, 61U.S.P.Q.2d 1430 (Fed. Cir. 2002).

Corriveau et al. describes a method of dynamically controlling the length of R_DATA messages on a random access channel. On page 3 of the Final Office Action dated August 26, 2002, it is stated that "Corriveau et al. does not . . . disclose transmitting power control information." Accordingly, the disclosure of Corriveau et al. is deficient in disclosing all of the recitations of claims 1-15 and 17.

Quick, Jr. describes a random access communications channel for data services. Quick, Jr. does disclose in column 10, lines 34-37 that "[a] command signal is generated at the cell-site 108 and transmitted to the remote unit 102 for adjusting the transmission power of the remote unit 102 . . . " It is disclosed in column 10, lines 48-50 that " . . . it is preferable to use the same

power control method, on both the Traffic Channels and the random access channels. " However, Quick, Jr. does not disclose transmitting power control information through a forward common channel, as recited in claims 1-15 and 17.

The random access channel disclosed by Quick, Jr. is not equivalent to the forward common channel recited in claims 1-15 and 17. This is evident and apparent from inspection of Figures 2 and 3 of Quick Jr. illustrate random access channel 208 transmitting data from user 202 to cell-site 108. A forward common channel is defined in the present specification as a communication channel from a base station to a mobile station. However, unlike the forward common channel recited in claims 1-15 and 17, random access channel 208 disclosed by Quick Jr. is from user 202 to cell-site 108. Accordingly, the random access channel 208 disclosed in Figures 2 and 3 of Quick Jr. is not adequate in disclosing the recited forward common channel of claims 1-15 and 17. Accordingly, Quick, Jr. does not alleviate the deficiencies of Corriveau et al.

A *prima facie* case of obviousness has not been established at least because neither Corriveau et al. nor Quick Jr. teach or suggest all of the claim limitations. This is evident apparent, it is neither Corriveau et al. nor Quick Jr. disclose ". . . transmitting . . . power control information to respective mobile stations through [a] forward common channel." Further, there is no suggestion or motivation in either Corriveau et al. or Quick Jr. to either modify or combine these references to overcome the deficiencies of the disclosures.

CONCLUSION

In view of the above arguments, the Appellant respectfully requests the Honorable Board of Appeals and Interference to withdrawal the rejection of claims 18-20 under 35 U.S.C. §112, first paragraph and the rejection of claims 1-15 and 17 under 35 U.S.C. §103(a).

Respectfully submitted,
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APPENDIX

1. A method for performing a random access in a mobile communication system, comprising:

monitoring at base station a state of a reverse common channel;

determining state information of the reverse common channel corresponding to a result of the monitoring using one slot allocated to a forward common channel; and,

transmitting the state information and power control information to respective mobile stations through the forward common channel.

2. A method as claimed in claim 1, wherein the slot includes at least two channel information bits and one power or reservation control bit.

3. A method as claimed in claim 2, wherein, if at least two of the channel information bits are used the channel information bits are repeated with an odd number of times.

4. A method as claimed in claim 1, wherein the state information of the reverse common channel corresponding to the result of the monitoring determines one of a plurality of preset state information.

5. A method as claimed in claim 4, wherein the state information comprising;

idle-normal state information representing a state in which the reverse common channel is in an idle state and not reserved by a particular mobile station,

idle-reservation state information representing a state in which the reverse common channel is in a idle state and reserved by a particular mobile station,

busy-down state information representing both a state in which the reverse common channel is in a busy state and a command for reducing a transmission power to the mobile station, and

busy-up state information representing both a state in which the reverse common channel is in a busy state and a command for boosting a transmission power to the mobile station.

6. A method as claimed in claim 5, wherein the base station transmits a message for performing a random access in a case when every even numbered slot with reference to a first slot number of one frame has the idle-normal state information.

7. A method as claimed in claim 5, wherein the idle-reservation state information is transmitted in succession loaded on two slots in a case when the state information transmitted from the base station to the mobile station is the idle-reservation state information.

8. A method as claimed in claim 1, wherein the base station determines the power control command before a starting point of each slot allocated to the reverse common channel.

9. A method as claimed in claim 1, wherein the base station matches periods of the reverse slots the mobile station uses to forward slots before using the reverse slot.

10. A method as claimed in claim 1, wherein the base station feeds back the state information continuously using a portion of broadcasting channel.

11. A method as claimed in claim 1, after the transmitting step, further comprising the steps of:

receiving and analyzing at respective mobile station state information of the reverse common channel; and,

performing at the respective mobile station a random access according to the state information.

12. A method as claimed in claim 11, wherein the message transmission is stopped if two idle state slots are detected by the mobile station in succession as a result of monitoring the next slot after transmission of a message through an arbitrary slot for performing random access.

13. A method as claimed in claim 11, wherein the mobile station does not change the transmission power for the idle state information occurred during performing random access.

14. A method as claimed in claim 11, after the step of performing a random access, further including the step of determining a state of the reverse common channel through information contained in the next slot.

15. A method as claimed in claim 14, wherein the mobile station determines as a result of the determination that the random access is performed properly if the reverse common channel is in a busy state, and the random access is performed improperly if the reverse common channel is in an idle state.

17. A method for performing a random access in a mobile communication system, comprising:

monitoring at base station a state of a reverse common channel;

determining state information of the reverse common channel corresponding to a result of the monitoring using a portion of one slot allocated to a forward common channel; and,

transmitting the state information and power control information to respective mobile stations through the forward common channel.

18. An apparatus comprising:

a receiver configured to receive a first signal, wherein the first signal comprises a paging channel; and

circuitry configured to extract power control information from the received first signal.

19. The apparatus of claim 18, further comprising a transmitter configured to transmit a second signal, wherein the power level of the second signal is in accordance of the extracted power control information.

20. The apparatus of claim 19, wherein the first signal and the second signal are both radio signals.

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ASSISTANT COMMISSIONER FOR PATENTS
Washington, D. C. 20231

Dear Sir:

Transmitted herewith is an Amendment and/or Reply in the above identified application.
[X] No additional fee is required.
[ ] Also attached:

The fee has been calculated as shown below:

	NO. OF CLAIMS	HIGHEST PREVIOUSLY PAID FOR	EXTRA CLAIMS	RATE	FEE
Total Claims	20	20		x $18 =	$0.00
Independent Claims	3	3		x $84 =	$0.00
		If multiple claims newly presented, add $280.00			
		Fee for extension of time			
				TOTAL FEE DUE	$0.00

[ ] Please charge my Deposit Account No. 16-0607 in the amount of $. An additional copy of this transmittal sheet is submitted herewith.

[X] A check in the amount of $ 320.00 (Check # 9340) is attached.

[X] The Commissioner is hereby authorized to charge payment of any fees associated with this communication or credit any overpayment, to Deposit Account No. 16-0607, including any filing fees under 37 C.F.R. 1.16 for presentation of extra claims and any patent application processing fees under 37 C.F.R. 1.17.

Respectfully submitted,
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